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ABSTRACT

A variety of college writing programs was surveyed and evaluated for examples of approaches to the teaching of the writing process in expository, business, professional, and technical writing. Some of the findings are: (1) Freshman composition teachers are focusing more on teaching the composition process than they were before, but one course in the freshman year is hardly enough training to make a student a skilled writer. (2) Advanced composition courses are becoming more popular, but there is a lack of definition of what advanced composition should cover. (3) Writing labs are available now at most schools, concentrating on teaching the mechanics of correct grammar for underprepared students. (4) "Writing across the curriculum" is a catch phrase covering several ways to involve non-English teachers in the teaching of document design skills. This interdisciplinary approach is the one most likely to have an effect on student awareness of the importance of writing ability. (5) Technical writing is the most appropriate model for a classroom-based course that directly teaches the composition process, including audience awareness, stylistics, use of graphics, and review, but few nontechnical students take such a course. (6) There is great potential in graduate writing programs, because the few programs now operating at that level differ not only in focus but also in quality. (RL)

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DOCUMENT DESIGN PROJECT

Teaching College Students How to Write:

Training Opportunities for Document Designers

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Kathryn Racette

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ABOUT THE DOCUMENT DESIGN PROJECT

In September 1978, the American Institutes for Research (AIR) began the Document Design Project to foster clear and simple writing and design of public documents. The purpose of the Document Design Project (DDP) is to help make forms, regulations, brochures, and other written materials easier for people to read, to understand, and to use.

Carnegie-Mellon University and Siegel & Gale, Inc., a private firm that specializes in language simplification and language training, work with AIR on this project. Funding for the project comes from the National Institute of Education.

The project's goal is to increase the knowledge and skills of people who produce public documents. To accomplish this goal, the Document Design Project is working on three tasks:

Task 1: To conduct theoretical and applied research studies on language comprehension, on the ways in which skilled and unskilled writers work, on problems associated with different document features.

Task 2: To work directly with government and private agencies as they produce materials for public use.

Task 3: To develop courses on writing and design for graduate students and undergraduates.

This report is part of the Task 3 effort. It covers current college programs in writing.

If you have questions or comments on this report or on other work of the Document Design Project, contact Dr. Janice C. Redish, Director, The Document Design Project, AIR, (202) 342-5071.

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Teaching College Students How To Write: Training Opportunities For Document Designers

Introduction

Background

In September 1978, the American Institutes for Research began a multi-year project to improve the quality of public documents. The Teaching and Learning/Reading and Language Group at the National Institute of Education is presently supporting the Document Design Project. One of the tasks of this project is to develop an undergraduate level course in which students can learn the skills needed to develop and write a clear, direct, and well-organized document. Another is to establish a model, interdisciplinary graduate program in document design research.

There are two preliminary steps. One is to find out what is now being taught on the undergraduate and graduate levels. The other is to find out about the training that people who are given writing tasks in government and industry had (or didn't have) in how to write.

This paper covers the first topic, current college programs. The Document Design Project is now addressing the second topic by surveying several government agencies and private employers to find out about the staff's training and training needs in document design.

Focus

This study is a brief look at some of the college programs that are trying to teach document design skills that students will find useful in their professions. We

use the term "document design" to emphasize our interest in a broad view of the composition process. We include not only stylistics, but also audience, purpose, and the use of graphics.

Our focus on document design sets two different dimensions for our study. First of all, we are interested only in training that emphasizes non-fiction work; we are interested in courses in expository, business, professional, and technical writing, but not in creative writing courses. Secondly, we are interested in the teaching of the writing *process*; we are not primarily interested in error-correction or in the teaching of basic skills in sentence-combining, grammar, or punctuation.

We did not seek out schools that have majors or minors in expository writing because our concern on the undergraduate level is not primarily with English majors who later become professional writers. People hired in business or government as writers generally do have good writing skills. But English majors in a literature-oriented curriculum may get very little training in composition. And students who major in economics, government, sociology, or history often find that writing is a necessary, professional skill once they are on the job. They are not hired as writers, but they spend much of their working day writing memos, regulations, or reports. What is being offered in the college curriculum to help these students develop into skilled document designers?

Method

We searched for examples of interesting and innovative approaches to the teaching of document design. The information in this report comes from telephone conversations, letters, visits, and discussions at the 1979 meeting of the

Conference on College Composition and Communication (CCCC). Through an informal network of contacts, we have spoken with approximately 60 people: federal agency sponsors who fund writing programs on the university level; professors at colleges, junior colleges, and technical institutions; and heads of professional organizations of teachers and writers. A list of these people is appended to the report. We have included a complete address for each person so that readers who are interested in learning more about any particular curriculum can contact that university directly.

We make no claim that we have found all the schools that are involved in a particular type of program. The goal was not to get a complete inventory of courses or centers; but to bring together, in one brief report, the various approaches that innovative teachers are using to improve college students' skills in document design.

Overview of Findings

In the past decade there has been an unprecedented growth in the teaching of composition on college campuses. The traditional literature-based freshman English course still prevails, but the focus for many colleges has shifted from literary appreciation to writing skills. Most schools now offer composition courses beyond the freshman year. Many have writing labs to help individual students; and others have tried, by a variety of means, to involve faculty in other departments in the teaching of writing.

Composition is, however, still the stepchild of college English departments. As Donald Stewart of Kansas State University recently wrote, "Let us be blunt. Until very recently, composition research and teaching have not been considered intellectually respectable by those in power in college English departments in this country. For many, they

still aren't" (Stewart, 1978, p. 14).

There are four controversial issues in the teaching of composition in American colleges today. These are:

- Should composition be as important as literature in the priorities of the English department?
- Should writing be taught to groups in a class setting or to individuals in a writing lab?
- Should writing be taught only in English courses or throughout the curriculum?
- Can the writing process be taught; or is writing an art learned only through mimicry, experience, and correction of finished products?

These four questions provide a framework for the sections that follow. In the remainder of this paper we discuss:

- freshman composition courses,
- advanced composition courses,
- writing labs,
- writing across the curriculum and team-teaching experiments,
- technical writing, and
- graduate programs in rhetoric.

Freshman Composition

Freshman composition is a vast subject. Almost every university, college, and community college offers English courses for entering students. In many schools the required freshman course has traditionally been a combination of in-class discussion of selections from good literature and at-home production of weekly themes. Such a course has dual objectives -- to improve the students' skills both in literary criticism and in composition. Moreover, for many professors in English departments, literature is the important part of the course. Writing is something that happens along the way.

In the last five years, however, there has been a major shift in freshman courses, away from the goal of teaching literary criticism and toward a greater emphasis on developing students' skills in composition. Schools are offering more composition courses, and writing has become a more important and a more integral part of the curriculum. Instructors are giving more writing assignments and using techniques such as self grading and peer review to cope with the number of papers to review.

The 1978 CEA Survey

Claude Gibson, Professor of English at Texas A&M, recently reported on freshman composition in American colleges (Gibson, 1978). The College English Association sponsored the survey in which Gibson sent questionnaires to 982 schools. The response rate was just under fifty percent; 486 schools replied.

Two-thirds of the schools that responded indicated that their freshman English course is now primarily concerned with writing. Over half of the schools claimed that the focus of this course had changed in the last five years, generally toward writing.

Table 9 in Gibson's report shows that twenty-one percent of the schools reporting a change now stress writing, with less emphasis on, or a total elimination of, literature. An additional 6.7 percent now stress expository writing where they used to require literature-based themes. This trend toward teaching composition in freshman composition courses was confirmed by others we spoke with.

However, freshman composition is usually taught by graduate assistants who may have had little training in composition or in the teaching of composition. Literature-

oriented graduate students, like literature-oriented professors, may feel uncomfortable teaching a freshman English course that stresses writing skills and not literature.

The workload freshman English teachers have is not conducive to spending a lot of time on each student paper. Table 10 in Gibson's report shows that freshman composition students, on the average, turn in nine 500-word themes in a semester. Table 2 shows that the average course load is 3.18 classes. Staff at 153 schools reported course loads of four and more. Although the average class size is 22, 64 percent reported larger classes, averaging 26 students. Nine themes for four classes of 26 students would be 936 papers per semester -- an overwhelming burden for any instructor.

The range of techniques and texts used is so great that Gibson could not report on it. Freshman composition is in a state of flux. As we will see in the next section, there is a similar lack of agreement on text or technique in advanced composition courses.

Some Innovative Projects

At the University of Southern California, Sylvia Manning supervises 80 instructors who teach a workshop-style expository writing course that is required of all freshman students. Manning stresses that the "workshop" concept means that instructors intervene at different points in the writing process rather than critiquing only the final product. Students work at their own pace as much as possible. Instructors oversee extra lab sessions with workbooks for students who need help on the basic mechanics of writing. This program also has a grant from The Fund for the Improvement of Postsecondary Education (FIPSE) to develop and implement a twc-week training session for the graduate assistants who serve as instructors.

Some of the most interesting work in the past decade has been in developing curricula, training teachers, and writing textbooks for students who need help with basic writing skills. FIPSE has also funded several of these efforts. The three programs described in the next few paragraphs have each focused on a different aspect of the need to help students who come to college without good writing skills. The first uses a combined course-plus-lab approach; the second tries to reach students before they get to college; the third has focused on a test to assess students' needs and achievements.

At York College in Queens, New York (part of the City University of New York), a combined course and lab approach has been successful in helping speakers of nonstandard English learn to write in standard English. The COMP-LAB project at York College developed a basic writing course that is, for these students, the first part of a three-semester sequence. Students spend fewer hours in the classroom than in traditional courses but they also do independent work in the lab. In the classroom, students work on composing; in the lab, they work on editing for correctness, using self-teaching exercises. Staff of the York College project are now also teaching writing to workers at a community mental health clinic and to customer representatives at Con Ed, the local utility company. Mary Epes directs this project.

Queens College, another branch of CUNY in the same borough of New York, has been trying to reach underprepared students before they enter college. Sandra Schor and her colleagues are working with four local high schools that send many of their students to Queens College. They are adapting the introductory college English curriculum to high schools, preparing high school and college teachers to work with this curriculum, and experimenting with alternate ways of teaching composition.

A third FIPSE-funded writing program, at Johnson State College in Johnson, Vermont, is developing a *Writing Competency Exam* to serve as a diagnostic tool and assessment procedure. Faculty from many disciplines, not just English, are involved as readers for the exam and also teach writing and critical thinking skills as part of their content courses. Anne J. Herrington coordinates this project at Johnson State College.

Advanced Composition

Another indication of increasing interest in teaching college students how to write is the number of advanced courses being offered. An Association of Teachers of Advanced Composition (ATAC) was formed at the 1979 CCCC meeting to promote discussion of goals and methods for courses in advanced composition.

This past year Michael Hogan, an Assistant Professor of English at Southeast Missouri State University in Cape Girardeau, Missouri, surveyed schools in all fifty states to find out what was being taught under the rubric of 'advanced composition'. Preliminary analysis of the 480 replies Hogan received shows that there is no clear definition of what a course in advanced composition should cover, or what text should be used. Respondents listed a total of 95 different rhetoric texts, 75 different readers and 29 different handbooks for courses that met their personal definitions of advanced composition.

Teachers of advanced composition are concerned that texts used in some schools to teach freshman composition are used elsewhere in advanced composition courses. Obviously what is taught on the freshman level in some places is considered advanced work elsewhere.

There are several plausible reasons for this. If students come poorly prepared in writing skills, the freshman course may need to emphasize mechanics and students may need a second course to cover improving style, audience awareness, etc. If the freshman requirement is not really a composition course, but is literature and themes, the "advanced" composition course may actually be the first time students are working on writing as a process.

Just as there is no clear definition of what an advanced composition course should cover or what text to use, there is no agreement on who the audience is. Some schools require advanced composition of their English majors and their English education majors; but in other schools, the advanced composition course is for students majoring in other subjects who need to learn how to write better.

Two-fifths of the schools responding to Hogan's survey do not require English majors to take any advanced composition courses. One-fifth have no requirement for English education majors. The reasons cited show once again the bias toward literature of most English departments and the commonly held belief that composition skills either come naturally to any English major or are not relevant to literature training.

The University of Maryland will institute a junior year writing requirement beginning in the fall of 1980. The course will emphasize the writing process, particularly revision by both the instructor and the class. It will not be literature-based -- rather, students will choose a topic in their major field, and the final paper will be submitted to both the English teacher and, when possible, to a teacher in the major subject as well. This is the only program we are aware of which plans to *require all* undergraduates in a large university to take an advanced composition course. Gale Smith in the Department of English is in charge of this program at the University of

Maryland in College Park.

Some schools are instituting a competency exam in writing. Students are required to take the exam at the end of their sophomore year. Students who fail must enroll in a writing course during their junior year. The exam developed at Vermont State College is used both for diagnosing students' problems and for assessing students' competency. City University of New York (CUNY) and University of Massachusetts/ Boston have also developed exams to test students' skills in writing.

Respondents to Hogan's survey were polarized on the need to stress grammar, punctuation and mechanics in advanced composition courses. They were strongly in favor of or strongly against basic skills being an appropriate concern. This difference, once again, probably reflects the realities of the needs of students at different schools and the prior preparation students have had in writing, either in high school or in the freshman year. The syllabus of a course for juniors who cannot pass a competency exam would have to be different from the syllabus of a course for advanced students who want to learn the broader skills we are calling document design. The need for a course on mechanics also depends on whether or not other sources are available to teach these skills. The primary such source on most campuses is the writing lab. We now turn to a discussion of the laboratory approach to teaching document design skills.

Writing Labs

The key feature of writing labs or writing centers is individualized supplementary instruction. This may take the form of immediate consultation, regular sessions over a period of time, or mini-courses. Many labs use self-instructional materials or computer-assisted instruction.

The University of Iowa is generally credited with having the oldest continuing writing lab, although there is disagreement about whether to date its beginning to the 1920's or the 1930's. It is in the last five years, however, that writing centers have sprung up throughout the country.

The mailing list for the *Writing Lab Newsletter* has grown from 60 names when it began in 1976 to over 500 names by the summer of 1979. (The *Writing Lab Newsletter* is edited by Muriel Harris at Purdue University. Myrna Goldenberg at Montgomery College in Rockville, Maryland, is currently handling the mailing list.)

At the 1979 CCCC meeting, writing labs were one of the seven themes carried through the three-day program. Over 150 people attended the Special Interest Group session on writing labs.

There is relatively little information available on the history and functioning of writing labs. Mary Croft of the University of Wisconsin/Stevens Point and Joyce Steward of the University of Wisconsin/Madison are writing a book about labs. Steven North in the Department of English at SUNY/Albany has just completed a doctoral dissertation on writing labs (North, 1979). North's dissertation is entitled *Writing Centers: A Sourcebook*; and most of it is suggestions for setting up, funding, and running a center. The introductory chapters provide a brief history of writing labs and a discussion of the various philosophies that can underlie a writing center.

In visiting 35 writing labs, however, North found that "in fact, most of the writing centers on /this/ tour had no carefully articulated pedagogy, no set of principles or conceptual model of how writing was taught (or learned) that generated a specific set of teaching strategies" (North, p. 21). Most writing labs are eclectic in their methods. They have a

variety of materials available, and allow tutors to select what is appropriate for a particular student's problem. The exceptions are labs that rely heavily on programmed instruction and labs that provide extensive training for the tutors.

The impetus for starting most writing labs has been the needs of the underprepared student. North claims that on many campuses both teachers and students view the writing lab as an "error--fix-it" shop for those who don't know the mechanics of writing standard English. This is an important and worthwhile function; but when a writing lab has an image of being for "remedial" work, students who are not getting training in the writing process may not seek help that they need.

Many writing labs are now going beyond teaching basic writing skills to entering students. At many colleges, tutors not only supplement the composition courses but also work with students on reports for other courses. Upper-level students as well as freshmen come for assistance. In the spring 1978 semester, the Purdue University Writing Lab, for example, helped 1336 students with:

- regularly scheduled rhetorical instruction,
- drop-in help,
- mini-courses,
- teachers visiting other classrooms, and
- self-instruction materials.

The concept and content of the mini-courses that were developed by the Purdue University Writing Lab have aroused the interest of composition teachers and other writing labs. Mini-courses are prepared curricula for small group instruction on a particular topic. Some are for single sessions; others take several sessions to cover all the material. Examples of Purdue University mini-courses are *Writing Letters of Application, Writing Effective Essay Exams,* and *Review of Grammar for the Law School Aptitude Test.*

Another very large writing lab that goes beyond remedial work is Joyce Steward's center at the University of Wisconsin/Madison. In this program, 2300 students per semester come for a total of about 10,000 visits. To handle such large numbers, the lab has developed "mods" of six to eight lessons on particular skills or content. These modules are taken mostly by freshmen and sophomores.

The lab at the University of Wisconsin/Madison differs from many others because it was not started as an adjunct to freshman composition for those who need extra help. It opened when the school eliminated the freshman composition requirement entirely. Staff of this lab work closely with other academic departments. For example, Dr. Steward goes into an economics course when the teacher assigns the research paper and gives the class hints on writing the paper.

A few other college writing labs are experimenting with outreach programs. Mary Croft's staff at the University of Wisconsin/Stevens Point gives training in writing to off-campus groups such as the police and legal services staff. They go to meetings in dormitories and student clubs as well as to other courses to teach mini-workshops on writing resumes, proposals, and reports. Janice Neuleib's center at the Illinois State University at Normal/Bloomington also has an outreach program to the community and to other departments on campus.

Many lab directors feel that students respond better in the lab setting than they do in the classroom. Students in the lab are better motivated because they come voluntarily. They see the tutor as a friendly helper, while they may view the classroom instructor as an adversary. The lab carries no credit; therefore, there is no grade to be concerned about.

However, most writing labs supplement course offerings in composition. Labs offer help to students with a specific

problem, and workshops or modules on a particular topic. Whether they are serving only the student who needs extra help in a composition class or the entire college and local community, writing labs are still clinics rather than comprehensive document design programs.

Writing Across The Curriculum

The general decline in quality of college students' writing, which spawned the emphasis on composition in freshman English courses and the spread of writing labs, has also fostered an interdisciplinary approach to teaching writing. The phrase "writing across the curriculum" covers a variety of approaches to raising the interest and expertise of faculty in other departments in teaching writing skills.

Both FIPSE and the National Endowment for the Humanities (NEH) fund programs in writing across the curriculum. A three-year NEH-funded program at Beaver College in Glenside, Pennsylvania represents a comprehensive model of writing across the curriculum. Elaine Maimon directs the project at Beaver College, which is aimed at increasing the responsibility of all faculty -- not just English teachers -- for improving and maintaining students' writing skills. To achieve this goal, the program includes:

- workshops and seminars led by outside writing experts for teachers from different departments;
- peer tutors trained by Dr. Maimon and the visiting experts. Tutors assist their fellow students with writing, reading and studying skills in a newly-established Writing Center;
- a year-long freshman English course with writing assignments based partly on suggestions from other departments;
- groups of three or four teachers working together to plan courses around a common theme. Team members attend each other's classes and

coordinate writing assignments. The English teacher on the team serves as writing consultant.

The Beaver College program achieves several objectives of the document design approach to teaching composition. Faculty in English and other departments learn techniques for *teaching* the composition process, rather than merely acting as critics of the completed papers. Theme material is drawn from a student's major field or outside interests rather than from literature.

Several colleges throughout the country are using one or more facets of the Beaver College model of writing across the curriculum. At Ramapo College in New Jersey, there are no English department composition courses. Faculty who would normally be assigned to an English department instead serve each of the college's seven schools as instructor/advisors.

Robert Weiss runs an NEH-funded program at West Chester State College in West Chester, Pennsylvania that includes a writing laboratory, a one-week summer workshop for all faculty, two new graduate courses in methods of teaching writing, and training for undergraduate tutors. In addition to the freshman composition course, there are Writing-Emphasis Courses in literature, history, government, cultural anthropology, sociology, and Latin-American culture.

Weiss and a colleague, John P. Field, have published a textbook called *Cases for Composition* (Little, Brown & Co., 1979). This is a new approach to freshman composition. Each of the fifty readings is a case study of a real life situation students might some day find themselves in. There are 148 writing assignments based on the cases. The advantage of the cases is that they present the student with the audience, purpose and context for each writing assignment so that the student must assume different roles as the writer.

Below, we discuss programs from different institutions to illustrate the writing across the curriculum approach further.

Teacher Training

- Deborah C. Andrews heads a writing clearinghouse at Drexel University for teachers of engineering and business. Workshops on teaching writing in the engineering classroom, on evaluating laboratory reports, and on general writing skills are offered to technical and business faculty and teaching assistants, as well as to instructors from the humanities/social sciences program for engineering students. The technical writing faculty now invites engineering instructors to discuss their views on writing at staff meetings. The Graduate School is conducting workshops to help research faculty with both proposal writing and designing documents.

- In 1976, Michigan Technological University initiated a program of two-day, off-campus institutes on writing across the curriculum for teachers from different disciplines. Toby Futwiler and Peter Schiff, faculty members with experience in teaching interdisciplinary writing, explore the writing process, discuss the evaluation and teaching of writing skills, and introduce strategies for incorporating writing assignments in other subject classes. Their discussion of the writing process emphasizes peer-group critiques and multiple revisions of assignments, and they devote some time to expressive (as opposed to "expository") writing across disciplines. In addition, the Department of Humanities publishes a newsletter on various aspects of communications education for distribution to all faculty members and student organizations.

- Hunter College ran a one-semester *Seminar on Teaching Writing in the Subject Areas* in the Spring of 1978. Seventeen faculty members from fourteen different departments participated

in the NEH-funded program. Several recommendations on writing in non-English courses came out of the seminar. A report on the seminar is available from Ann Raimes, The Writing Center, Hunter College.

Team Approach

- Harriet Hogan of the Humanities Department of the Ohio College of Applied Science at the University of Cincinnati coordinates the planning and teaching of an upper-level course in advanced technical communication with a senior design course offered by the technical departments. The communication course teaches both written and oral skills, including:

  - communication theory and rhetoric,
  - proposal writing,
  - writing style, organization and format,
  - graphics (primarily illustrations such as graphs and tables),
  - correspondence and resume writing, and
  - writing articles for publication.

The engineering design course requires the student to build a prototype or model, collect and analyze data, write and test a computer simulation, or do a combination of the three tasks.

The communication and the design courses are both two-quarter sessions. Each requires similar written assignments, such as abstracting, report writing and use of graphics, that may be coordinated by the instructors. The communication teacher assists with format, organization, and style of technical reports; technical faculty provide reading lists and possible research assignments for the writing course and serve as experts in graphics.

- At the University of Pittsburgh/Johnstown, Victoria M. Winkler of the Humanities Division and John G. Klavuhn of

Engineering Technology taught technical communication and senior-level mechanical design cooperatively. They introduced the problem-solving approach of technical courses to the writing class and made the model explicit in the mechanical design course where students are likely to use it intuitively. Winkler and Klavuhn give the following illustration of how the technical problem-solving mode parallels a process of rhetorical inquiry:

Design Principles	*Rhetorical Inquiry*
1. Problem formulation	1. Problem reformulation (invention)
2. Problem analysis	2. Audience analysis (rhetorical situation)
3. Search	3. Arrangement: basic report structure
4. Decision	4. Preparation of the prototype draft
5. Specification	5. Editing and proofreading

• Several approaches to team-teaching have been tried at Carnegie-Mellon University in Pittsburgh. In one case, an English teacher and a subject specialist team taught a public policy course. Thirty percent of the class time was spent on teaching writing skills. The two teachers developed assignments together; both read the papers and both conferred with the students.

• At the University of Washington, Joan Graham is director of writing for a program which links sections of a composition course to introductory lecture courses in different subjects. In the program, which originated under a grant from FIPSE, a writing teacher and a lecturer plan assignments together; each instructor evaluates the students' writing. Both sections require writing tasks, but the writing course complements work assigned in the other subject, and the writing teacher is

available to comment on preliminary drafts of papers for the lecture class. The same number of credits is awarded for each course, so that equal emphasis is given to the writing section.

- Several approaches to team teaching of technical writing and content courses are described in contributions to Thomas M. Sawyer's book *Technical and Professional Communication* (Sawyer, 1977).

Peer Tutors

- At Stanford University's School of Engineering, Ellen Nold directs the Communications Project in which students are taught writing and speaking skills by peer tutors who are attached to the various subject courses. Nold's tutors are fifth-year BS/MS engineering students with a demonstrated ability in the skills they will be coaching. They take a three-credit, one-quarter course to prepare for their assignment and they are paid as graduate assistants. Students are required to have a minimum number of sessions with a tutor for each course they take. Depending on the quality of their written work, some students are asked to spend extra time with the tutor.

- Under a two-year grant from FIPSE, Wheaton College adopted a writing across the curriculum program to help improve students' writing skills without introducing remedial sections of freshman English. Both English teachers and teachers from other departments receive training in special "Functional Writing" laboratory classes taught by an expert in that field. Classes emphasize the teaching of organizational skills and the diagnosis of writing problems. Exemplary students are chosen from the demonstration classes to be trained as writing tutors for English and other subject courses. Tutors administer diagnostic tests and exercises developed under the program.

Newsletter

- Angela Dorenkamp at Assumption College in Worcester, Massachusetts edits a newsletter called *Moving Out* about writing across the curriculum programs.

Technical Writing

In looking for curricula that teach document design skills, we found that technical writing courses come closest to the model we are seeking. Technical writing courses focus on job-related communication skills, on awareness of audience and purpose, and on the need to be clear, concise, and technically accurate.

Two formats prevail for the basic course in technical writing. One centers on writing the technical report, while the other covers a wide range of writing tasks that the technician will probably confront on the job. Common to both courses are units on theories of communication, technical literature and library research tools, audience, purpose, organization of the paper, editing, and use of graphics. Some technical writing courses study the process of technical report writing and the way in which the technician/writer fits into that process in the industrial setting.

Not all technical writing (or professional writing) courses promote the goal of clear communication with a lay audience. Some courses concentrate on teaching the vocabulary and traditions of a particular trade (or profession). This goal fosters communication among members of the same discipline but it does not teach students how to communicate clearly with a general audience.

The Carnegie-Mellon University Program

The last twenty years have seen the development of a

number of programs offering bachelor's or associate's degrees in technical writing. Pearsall (1976 and personal communication) lists approximately fifteen today. The oldest undergraduate technical writing major in the country is at Carnegie-Mellon University (CMU). The small but active program at CMU has graduated an average of ten students per year since 1958, when the school was still the Carnegie Institute of Technology.

The program at CMU, which grants a B.S. degree in Technical Writing and Editing, is typical of other technical writing majors we have examined. In addition to University core requirements in the humanities and the social sciences, students must acquire a strong general background in science or engineering: two courses are required in each of four different areas of science, mathematics, or engineering. Four basic English literature courses are required in the first two years; these are followed in the junior and senior years by a technical writing sequence of four courses. These are summarized below:

Exposition I: Professional Writing -- Covers pre-writing, organization, and editing processes; students are encouraged to find the subject matter and writing styles which best suit their interests and abilities; assignments include readings in rhetoric and several non-fiction papers of different lengths; both instructor and peers criticize writing assignments.

Exposition II: Models of Writing -- Focuses on the purpose, effect, and ethics of communication; assignments include readings in rhetoric, and writing tasks, one-third of which are persuasive, one-third expository, and one-third the student's choice; students' papers are criticized in detail on choice of diction, word order, medium, audience and format.

Exposition III: Technical Research and Report Writing -- Students survey and practice the various writing tasks confronted by the technical writer, including abstracts, definitions, instructions, news releases, letters, memoranda, proposals, and reports; they study the different roles -- report writer, editor, grammarian, group member -- of the professional writer; the semester project is a complete technical report with at least one graphic illustration; the class takes at least two field trips to observe the work and workplaces of technical writers.

Exposition IV: Internship -- 100 hours of on-the-job training in business or industry; the student is closely supervised by a professional writer who assigns pertinent writing tasks and evaluates the students' work.

Finally, students at CMU are required to elect two courses in graphic design. Choices include courses in design principles, photographic skills, illustration, printing processes and typography. Many technical writing courses include some work on how to use illustrations such as bar graphs and flow charts in technical reports. Students in other technical writing programs are required to take a graphics/design course that focuses on techniques of technical illustration (e.g., drafting three-dimensional forms). Several programs also include material on other visual techniques, such as film and video communication, as these processes are used more and more in industry. Graphics is the aspect of document design that is most often left out of regular English department composition courses.

Other Four-Year Degree Programs

Three other schools that offer a major in technical writing are the University of Minnesota, the University of Washington and Oklahoma State University.

• University of Minnesota, St. Paul, Minnesota: Thomas E. Pearsall directs this program, which offers both B.S. and M.S. degrees in Technical Communication. The program is similar to CMU's with an emphasis on communication skills and scientific/technical knowledge, and a one-quarter internship. In collaboration with Donald H. Cunningham of Morehead State University, Pearsall has written one of the better-known technical writing texts, *How to Write for the World of Work* (1978). He is also co-author of *Academic Programs in Technical Communication* (1976), the Society for Technical Communication's directory of college technical writing programs.

• University of Washington, Seattle, Washington: This interdisciplinary degree program offers a B.S. in Scientific and Technical Communication for students in the College of Engineering and a B.S. degree for students in the College of Arts and Sciences. Both degrees require the same core courses and electives in communication; they differ in the scientific or technical studies students pursue in their respective colleges. A distinctive feature of this program is the requirement of both a management course ("Managing Technical Publications") and a "Production Editing" course for all students. M. L. White and James W. Souther direct the technical communication program. Their textbook, *Technical Report Writing* (1977), was praised by several teachers in our survey.

• Oklahoma State University, Stillwater, Oklahoma: Oklahoma State offers a B.A. degree in English with a Technical Writing option. Thomas L. Warren heads this program, which has a core requirement of eight writing courses and ten to twelve courses in science, technology, or business. The one-semester internship may be extended to a full-time summer job doing technical communication tasks. Warren is currently president of the Council for Programs in Technical and Science Communication.

Two organizations, the Society for Technical Communication, and the Council for Programs in Technical and Scientific Communication, publish complete directories of college degree programs in technical and science writing and communication. Complete addresses for these organizations are included in the section on professional associations below.

Non-degree Programs

While fifteen to twenty colleges offer a major in technical writing, dozens more have individual courses or clusters of courses that teach technical communication to students from a broad spectrum of disciplines.

Thomas M. Sawyer heads the Department of Humanities at the School of Engineering at the University of Michigan. He directs a program that brings the arts and humanities into the engineering curriculum as well as provides students with the writing skills they will need on the job. Teachers in the program at Michigan include J. S. Mathes and Dwight W. Stevenson, authors of *Designing Technical Reports: Writing for Audiences in Organizations* (1976). The University of Michigan offers a course that teaches document design as a process. The catalogue gives this description of the course:

> *The purpose of this course . . . is to train you in communication of the sort required of practicing engineers and managers on-the-job. Specifically, you will be taught to design technical reports by following a systematic procedure. This procedure will enable you to analyze the audiences for reports, to select and arrange report materials, and to prepare and edit a report text. In short, the purpose of this course is to improve your mastery of the whole process of report writing from the pre-writing stages through the final editing stages.*

This course is one of four choices engineering students have to meet their *senior-level* writing requirement. Students also take a year-long "great books" course as freshmen and a

literature seminar as juniors.

Several people we talked to mentioned the technical writing course at Texas A&M University as one of the most successful in the country. Approximately 2,000 students in departments ranging from business to science and agriculture choose the course each year. Lawrence Reynolds, acting director of the technical writing program, offers several reasons for the success of the course:

- classes include students from many departments; therefore students learn to write for a general, uninitiated audience rather than to rely on the jargon of their respective fields;
- the course is restricted to juniors and seniors, who have a better grasp of the subject matter in their major fields and who are more oriented toward learning to write for the job;
- the combination of business students with technical and science students in the class calls for a broader range of assignments which benefits all students.

At Morehead State University in Morehead, Kentucky, both freshman and upper-level courses in technical writing are available. The freshman course is open to all students as an option for the required course in English composition. The upper-level course covers basic principles of technical writing; students write a professional research report for the course. The unit on graphics includes not only techniques for illustration (charts and graphs), but formatting (spacings, headings, etc.) as well. Donald H. Cunningham coordinates the technical writing program at Morehead. Cunningham also serves as editor of *The Technical Writing Teacher*, journal of the Association of Teachers of Technical Writing, and co-authored *How to Write for the World of Work* (1978) with

Thomas E. Pearsall.

All of the programs we have discussed to this point are in four-year colleges and universities. However, the field of technical writing is one area in which two-year colleges are doing significant work. One reason for finding process-oriented writing and design courses in two-year institutions is that the students are usually very directly concerned with getting useful skills for the working world. Also, the smaller bureaucracy in the two-year schools makes it easier to change curriculum, according to Nell Ann Pickett of Hinds Junior College in Raymond, Mississippi. Pickett and Ann Laster teach a technical writing course that has been approved by the college to fulfill the freshman writing requirement. Both occupational (e.g., nursing, landscape architecture) and liberal arts students choose this course. Picket and Laster have written several textbooks and articles, including *Technical English* (1975) and *Writing for Occupational Education* (1974).

David Fear of Valencia Community College in Orlando, Florida, is also mentioned frequently by technical writing teachers for his textbook, *Technical Writing* (1978).

Professional Associations

Three major professional associations are active in the field of technical writing. They are:

1. Society for Technical Communication
   Curtis T. Youngblood, Executive Director
   1010 Vermont Avenue, N.W.
   Washington, D.C. 20005

This is a national organization whose members include professionals in every medium of technical communication. Most members have degrees in journalism or English and are practicing professional writers or teachers. The STC

publishes a quarterly journal, *Technical Communication*, a quarterly newsletter, *Intercom*, and holds annual conventions. Local chapters are active and hold frequent meetings to keep members in touch with current issues in technical communication.

2. Association of Teachers of Technical Writing
   John A. Walter, President
   Department of English
   University of Texas
   Austin, Texas 78712

The ATTW publishes both a *Newsletter* and a professional journal, *The Technical Writing Teacher*. Most members are teachers of technical writing. The organization promotes research in the field and provides a liaison with other professional organizations.

3. Council for Programs in Technical and Scientific Communication
   Carolyn R. Miller, Treasurer
   Department of English
   Box 5308
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   Raleigh, North Carolina 27650

This organization is interested in the development of degree programs in technical and scientific communication. The Council holds an annual meeting and publishes a directory of degree programs.

Graduate Programs

The teaching of composition on the undergraduate level suffers from a lack of trained faculty. Almost all doctoral students in English concentrate on literature; but a program in literature is not adequate training to teach composition. Nor is the ability to write well a guarantee of competence as a teacher of writing.

Teachers of composition should be trained in modern rhetorical theory, cognitive psychology, linguistics,

psycholinguistics, sociolinguistics, current research on the writing process, and should have some acquaintance with graphics and typography. The graduate programs that are available do not encompass this list of areas. Most do not focus on both theory *and application.*

In the last five years there has been some growth in the number of schools offering a Ph.D. in Rhetoric, but there are still fewer than a dozen in the country. These are

- University of Southern California (Ross Winterowd)
- University of Texas (James Kinneavy)
- University of Iowa (Richard Lloyd-Jones)
- University of Tulsa
- State University of New York/Albany
- University of California/Berkeley
- University of California/San Diego
- University of Chicago
- Rensselaer Polytechnic Institute
- University of Michigan

The new program that Richard Young and Erwin Steinberg are developing at Carnegie-Mellon University as part of the Document Design Project has already attracted considerable attention in the field. CMU will offer a Ph.D. in Rhetoric, which is seen as a research degree, and a D.A. (Doctor of Arts) in Rhetoric that will stress preparation for university level teachers of composition. Other schools are also developing a curriculum. The University of Indiana is trying to build a program. Donald Stewart reported in the *CEA Forum* (October 1978) that Kansas State University is instituting an M.A. option with emphasis on composition and rhetoric.

There are also schools where graduate students can specialize in rhetoric, studying with specific professors (Edward P. J. Corbett at Ohio State, for example), but where there is neither the range of staff nor the course offerings to constitute an

interdisciplinary graduate degree program.

There are also two short training programs that should be mentioned. The University of Iowa has a large NEH grant to run two six-month-long "Institutes on Writing" for directors of freshman composition programs. Headed by Carl H. Klaus, the Institute ran the program during the Spring of 1979 and plans to run it again from January to July 1980. The program includes

- three sixteen-week colloquia (Writing for the Liberal Arts, Humanistic Approaches to the Study of Writing, Theory and Practice in the Design of Writing Courses),
- four short courses (Administration of Writing Programs, Design of In-Service Training Programs, Design and Operation of Writing Laboratories, Psychological Dimensions of Teaching Composition),
- a final eight-week seminar/workshop, during which participants design new first-year courses in writing and courses in the teaching of writing for their home institutions.

Janice Lauer of the University of Detroit runs two-week summer seminars where she brings together the leaders in the field to provide participants with intensive training in rhetoric. Most of the seminar participants already have Ph.D.s in English. They are people trained in literature who find themselves in charge of writing programs.

Each of the graduate degree programs has a different focus, either deliberately built into the curriculum or because of the particular interest of the leading professor. With Winterowd at USC the focus is rhetoric and linguistics. At Rensselaer, the specialty is technical communication; at the University of Chicago, history and philosophy of rhetoric. The new program at CMU will focus on the theory of rhetoric and the cognitive processes involved in rhetorical production. Even among these programs, few schools are strong in the

application of rhetorical theory to the teaching of composition. The University of Michigan did not offer a course in pedagogy until graduate students petitioned for it last year.

The programs differ, not only in focus, but also in quality. People in the field seem most excited about what is going on at USC and Texas and about the new program at CMU.

Potential graduate students may find it difficult to get good advice on program quality and on matching their interests to the focus of the different programs. This is a concern that the Rhetoric Society plans to address at the Special Interest Group session during the CCCC meeting in Washington next March. They will raise the questions of what a graduate program in rhetoric should include and what standards should be used to judge the effectiveness of a graduate program in rhetoric. The discussion should also help the many others who are interested in starting graduate programs in rhetoric.

Summary and Conclusion

We have looked at a variety of approaches to teaching document design skills to college students. *Freshman composition* teachers are focusing more on teaching the composition process than they were five years ago. One course in the freshman year, however, is hardly enough training to make a student a skilled writer. Few freshmen who are not English majors can see the relevance of writing courses to their future professional careers. Only when they are seniors (and perhaps not even then) do they realize how important good writing skills are to most professional work.

Advanced composition courses are becoming more popular, but there is a lack of definition of what advanced composition should cover. There is still no set of common goals or curriculum.

Writing labs are available now at most schools, Many concentrate on teaching the mechanics of correct grammar for underprepared students. Only a few have developed outreach programs, teaching aspects of the composition process in the context of a real-world experience. Writing labs are clinics, supplementing the classroom curriculum.

Writing across the curriculum is a catch phrase covering several ways to involve non-English teachers in the teaching of document design skills. The interdisciplinary approach is the one most likely to have an effect on students' awareness of how important writing is in professional work. Many writing across the curriculum programs, however, are limited to workshops for non-English faculty. These contribute to the goal of preparing students to write well by

- sensitizing the faculty to be concerned about students' writing abilities;
- showing the faculty how to make realistic demands on students for written assignments; and
- working with the faculty to achieve common standards for grading written work.

Where composition teachers team-teach with content specialists, writing across the curriculum programs come closest to teaching document design skills that will be directly useful to students in the world of work.

Technical writing is the most appropriate model for a classroom-based course that directly teaches the composition process, including audience awareness, stylistics, use of graphics, and review. Few non-technical students, however, take such a course. The industrial emphasis of most technical writing courses also makes the content inapplicable for students from other fields.

Returning to the four questions posed in the introduction to this paper, we would argue that:

- composition should be, although it is not now, as important as literature in the priorities of an English department;

- the writing lab is an excellent and necessary supplement to composition courses, but cannot bear the entire burden of teaching students how to write;

- good writing skills should be required in every course; faculty throughout the school should be aware of appropriate expectations and assignments in writing; but content specialists must work with teachers of composition--they cannot be expected to replace specialists in the teaching of document design skills;

- composition can and should be explicitly taught as a step-by-step process.

Our informal survey shows that there are few courses now available that cover the range of topics we call document design. There is more emphasis now than there was a decade ago on teaching the *process* of composing. Many composition teachers now give more attention than they did before to pre-writing steps ("planning" or "invention" to use the technical terms of rhetoricians). Some teachers assign compositions for different audiences and different purposes. However, composition courses for non-technical students seldom include any work on format, typography or graphics. Even courses that stress writing for a reader seldom assign students to find out if the intended audience can, in fact, read, understand, and use the document.

Many students still never take a composition course after their freshman year. Students in the liberal arts (humanities, English, social sciences) should have the option of a course in their senior year that covers the skills needed to plan, develop, and test the types of documents that professionals write on the job. The Document Design Project is now developing a syllabus for such a course.

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